AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims:

Claims 1-24: Cancelled

Claim 25 (Currently amended):   An apparatus for Transmission Control Protocol (TCP) flow control of data from a transmitting end to a receiving end via an intermediate element comprising a transmit buffer in a communication system, the apparatus comprising:

a processor for:

determining delay in the transmit buffer; and

~~configured to modify~~ modifying TCP window size based on the determined delay and a target transmit buffer delay.

Claim 26 (Previously presented):   The apparatus of claim 25, wherein the processor for modifying TCP window size comprises means for sending an indication of modified TCP window size to the transmitting end of the communication system.

Claim 27 (Previously presented):   The apparatus of claim 26, wherein the transmitting end of the communication system is a TCP server.

Claim 28 (Previously presented):   The apparatus of claim 26, wherein the processor for sending an indication of modified TCP window size is configured to send the indication of modified TCP window size in an acknowledge packet.

Claim 29 (Cancelled)

Claim 30 (Previously presented):   The apparatus of claim 25, wherein the processor for modifying TCP window size modifies the TCP window size as a function of the determined transmit buffer delay and a previously determined TCP window size.

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Claim 31 (Previously presented):   The apparatus of claim 25, wherein the processor for modifying TCP window size modifies the TCP window size as a function of the determined transmit buffer delay and a function of control loop gain.

Claim 32 (Previously presented):   The apparatus of claim 25, wherein the processor for modifying TCP window size comprises means for determining a number of received acknowledge packets.

Claim 33 (Previously presented):   The apparatus of claim 32, wherein the processor for modifying TCP window size is configured to further modify TCP window size in response to the logic for determining a number of received acknowledge packets determining a number of acknowledge packets equal to half of a current number of data units in the system.

Claim 34 (Previously presented):   The apparatus of claim 25, wherein the processor for determining delay in the transmit buffer comprises determining mean buffer delay of a plurality of data units passing through the transmit buffer and modifying TCP window size modifies TCP window size as a function of the mean buffer delay.

Claim 35 (Previously presented):   The apparatus of claim 34, wherein the processor for modifying TCP window size is arranged to modify TCP window size if the mean buffer delay is within a predetermined range about a target delay, by an amount related to a difference between the mean buffer delay and the target delay.

Claim 36 (Previously presented):   The apparatus of claim 34, wherein the processor for modifying TCP window size is arranged to modify TCP window size if the mean buffer delay is outside a predetermined range about a target delay, by an amount related to a difference between a current mean buffer size and a predetermined value.

Claim 37 (Previously presented):   The apparatus of claim 25, wherein the communication system is a wireless communication system and the intermediate element is a network controller of the system.

Claim 38 (Previously presented):   The apparatus of claim 37, wherein the wireless communication system comprises a UTRAN system.

Claim 39 (Currently amended):   A method for Transmission Control Protocol (TCP) flow control of data from a transmitting end to a receiving end via an intermediate element comprising a transmit buffer in a communication system, the method comprising:

a processor for determining, by a processor, delay in the transmit buffer; and

modifying, by the processor, TCP window size based on the determined delay and a target transmit buffer delay.

Claim 40 (Previously presented):   The method of claim 39, wherein modifying TCP window size comprises sending an indication of modified TCP window size to a transmitting end of the communication system.

Claim 41 (Previously presented):   The method of claim 40, wherein sending the indication of modified TCP window size is sent in an acknowledge packet.

Claim 42 (Cancelled)

Claim 43 (Previously presented):   The method of claim 39, wherein modifying TCP window size comprises determining a new TCP window size as a function of the determined transit buffer delay and a previously determined TCP window size.

Claim 44 (Previously presented):   The method of claim 39, wherein modifying TCP window size comprises modifying the TCP window size as a function of the determined transmit buffer delay and a function of control loop gain.

Claim 45 (Previously presented):   The method of claim 39, further comprising determining a number of received acknowledge packets.

Claim 46 (Previously presented):   The method of claim 45, wherein further modifying the TCP window size is performed in response to determining the number of received acknowledge packets is equal to half of a current number of data units in the communication system.

Claim 47 (Previously presented):   The method of claim 39, wherein determining delay in the transmit buffer comprises determining mean buffer delay of a plurality of data units passing through the transmit buffer and modifying TCP window size as a function of the mean buffer delay.

Claim 48 (Previously presented):   The method of claim 47, comprising modifying TCP window size if the mean buffer delay is within a predetermined range about a target delay, by an amount related to a difference between the mean buffer delay and the target delay.

Claim 49 (Previously presented):   The method of claim 47, comprising modifying TCP window size if the mean buffer delay is outside a predetermined range about a target delay, by an amount related to a difference between a current mean buffer size and a predetermined value.

Claim 50 (Previously presented):   The method of claim 39, wherein the intermediate element is a network controller of a wireless communication system.

Claim 51 (Previously presented):   The method of claim 50, wherein the wireless communication system comprises a UTRAN system.

Claim 52 (Currently amended):   A computer-readable medium encoded with executable instructions[[,]] that when executed will:

    determine delay in the transmit buffer; and

    modify TCP window size based on the determined delay and a target transmit buffer delay.

Claim 53 (Previously presented):   An integrated circuit comprising the apparatus of claim 25.